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ABSTRACT

This course is designed to enhance reading and writing skills. It is tied to an interactive computer program (The New Reading Disc) that provides opportunities for reading, hearing sentences read, and writing letters and memos. Special emphasis is placed on workers' understanding of the importance of their jobs and how they fit into the total process of axle production. The course description lists target audience, general objective, and typical results observed. The next section gives instructors basic information related to providing successful educational programs in a workplace setting, an instructor's lexicon of strategies and principles that can be used in teaching, instructor's role and responsibilities, and course objectives. An explanation of lesson format lists six parts of the template used to design the lessons--understanding/outcome, materials, demonstration, exercise/engagement, workplace application, and evaluation/comments. A sample template and explanation of each part follows. A section on planning and scheduling deals with time requirements, class size, expected outcomes, prerequisites, and suggested timing for each lesson. Lessons are organized into the following categories: identifying parts of computers; job activities and duties; job terminology; workplace changes; editing; letters and memos; manufacturing process; manufacturing gears; sequential order of work-related events; alternative fuels; main idea; problem-solving steps; stating and supporting an opinion; locating details. Also included are reading activities and writing exercises. (KC)

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ED 424 383

WORKPLACE EDUCATION

Communication on Computer

Improving Reading & Writing Skills using a Computer

Instructor's Guide

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Project ALERT

CE 077 293

Wayne State University
College of Education

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Effective Communication on Computer

Description: This computer-based course is designed to enhance reading and writing skills. This interactive computer program will provide opportunities for reading, hearing sentences read, and writing letters and memo. Special emphasis is placed on workers' understanding of the importance of their jobs and how they fit into the total process of axle production. They will write and edit job activities as well as write memos about situations/problems at work.

Major topics for discussion include:

- The need for quality at each step of axle production
- The process of axle production as related to various job functions
- Writing effective letters and memos in work situations
- Today's workers compared to yesterday's workers
- Stress reduction
- Alternative fuels
- Desirable features in new cars
- Choosing health care providers
- Being a wise consumer
- Arguments for and against raising the speed limit
- Leasing or buying a car

Length of Time: This course was designed to provide about 40 hours of instruction.

Target Audience: Employees who are interested in learning to use computers and improving their personal communication skills, especially reading and writing.

General Objective: Participants in this class will improve their reading and writing skills in relation to their jobs as well as understand the basic operations of a computer.

Typical results expected: Participants will know and use accurate terminology for job-related writing. Participants will more effectively write letters and memos for communicating their needs, concerns, suggestions and thoughts. They will refresh and learn skills in spelling, grammar and punctuation, as they edit their writings for others to read. They will improve reading skills by reading meaningful material which they can take home and practice once they have heard it read to them on the computer. Participants will be aware of the need to upgrade skills for today's workplace and they will become familiar and comfortable using computers.

Comments: *Union Plant Chair:* "Everyone who went was very happy with the class." *Plant Production Director.* ."Workers are more comfortable using computers in the plant. "

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Rationale for Curriculum

Conditions at the workplace have changed since the days when all that was needed was a strong back and willing attitude. Workers are expected to communicate ideas and problems, work as team members, participate in quality maintenance, as well as adapt to new technology, which includes computers and computerized equipment, such as machines with CNC, Computer Numerical Control.

Workers need to be able to read and comprehend what they read, whether the operating guidelines for their machine, a memo about a problem from the previous shift, or a notice from the front office. Workers should be able to communicate ideas and problems to others, through verbal and written means. Workers should be able to formulate ideas to convey a written message, whether it be a memo about a problem during their shift, a request for time off, or a suggestion for improvement. Workers should know how to write letters in correct format for both workplace and personal matters.

Interest in learning computer skills is high among workers, who realize that they need to keep up with technology, both at the workplace and at home with their children, who are learning these skills. They are interested in learning about computers, how to use them and also how to choose one to purchase. It is important that they feel comfortable using this new avenue of communication.

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Explanation about Customizing *The New Reading Disk* Program

For instruction to be meaningful, it must meet the needs of students. This curriculum was designed for hourly workers at a large manufacturing plant in a large metropolitan area. The needs assessment of hourly workers indicated a perceived need for improvement in reading (60%), for computer skills (36%), for upgrading (32%) and for quality emphasis (20%). Others indicated a need for writing effective notes or memos. The lessons included were designed to meet these needs.

A CD-ROM program developed in the United Kingdom had been purchased to facilitate the reading and writing emphasis. This program, called ***The New Reading Disc,*** was customized to include site-specific information, pictures, videos, and terminology that, hopefully, would interest these workers. This particular program included four main formats: article writing, debates, letter writing, and map-related activities. The article section, which had addressed such topics as housing, consumer savvy, elderly care giving, etc. was expanded to include articles (with photos, text and voice overlays) on such topics as axle production, stress reduction, health care choices, alternative fuels, and desirable features in new cars. The debate section was expanded to include such topics as today's workers as compared to yesterday's workers, raising the speed limit, leasing or buying a car. The letter writing section now includes scenarios that addressed the plant manager, supervisor, co-workers, civic officials, or business personnel about problems or suggestions.

This interactive computer program provided opportunities for reading, hearing sentences being read, (if desired) selecting sentences that were provided or writing one's own sentences, which could be printed to take home. It was designed to accommodate workers that had limited reading competence. For those students with adequate reading ability, the texts could be used as springboards for discussion and writing activities. The texts for these formats are included in the appendix.

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Making it Work

This section of materials is provided to give instructors basic information related to providing successful educational programs in a workplace setting.

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Adult learners

General characteristics of adult learners:

1. Purposeful learning occurs with adults experience a problem or recognize a gap between where they are and where they want to be, then start to draw on resources to acquire the learning they consider necessary to close the gap.

2. One of the most important issues to consider from the adult learner point of view is "What's in it for me?" An adult needs to know that there is real value in what is being taught. Customize and adapt lessons to suit your students. Make a regular effort to point out what benefit the instruction has for the student. Many times students are unaware of the applications of learning. Make sure you point out possible applications of knowledge.

3. Adult learners insist that learning have relevance and value now, contrasted to youthful learners whose education is largely subject-centered and future-oriented. Most adults are already busy with their jobs and families, so the learning must be worthwhile.

4. Adult learners will drop out of educational situations that are seen as not accomplishing their own agenda.

5. The central organizing principle for adult learning must be around finding solutions for problems adults face. Emphasis must be on helping adults learn to cope with problems they face. Therefore, the instructor must be more *person*-centered than subject-centered.

6. Adult learners are well aware of what they need to know, and they like to participate actively in all phases of their education--assessment, instruction, and evaluation.

7. Many adult learners come into programs with the "baggage" based on a history of negative educational experiences. It is absolutely essential to provide a safe, non-threatening atmosphere where risks can be taken with out fear of humiliation or embarrassment.

Environment

Creating a safe environment for learning is a key factor in success. One of the elements that is part of a safe environment is multicultural sensitivity. The following suggestions should be considered as the lessons are delivered:

1. Use multiple instructional strategies to accommodate all learning styles. See *Learning Styles* for more information on this topic. Also see *Teaching Auditory Learners, Teaching Kinesthetic Learners; Teaching Visual Learners.*

2. Avoid ethnocentrism (belief in the superiority of one's own ethnic group), use of stereotypes, critical or judgmental attitudes, fear, and rigid expectations. Strive to

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address the various cultures represented in the group. Try the AAAA approach to Cultural Diversity: Awareness; Acceptance/Appreciation; Action

3. Seek to understand the unique motivations of your audience in the workplace. Each worksite has a particular culture. It is important that you strive to understand and become a part of that unique culture.

4. Use materials that are not slanted toward any particular group.

Above all, the instructor must establish a learning environment in which diversity is valued. Students need to feel that their cultural backgrounds are viewed as assets to the class.

Teaching Auditory Learners

(Adapted from materials from presentation, *Designing Workplace Training to Accommodate Culturally Diverse Learners*, Douglas Jones, Linda Mrowicki, Workplace Education Division of THE CENTER-RESOURCES FOR EDUCATION, delivered Jan. 1996.)

Auditory learners learn best by listening to others. They usually do well in a "traditional" classroom.

Audio tapes: Have students or groups listen to a tape or create their own tapes for each other to listen to.

Music: Record key points on an audio cassette with background music. Write a song, rap, jingle or rhyme about the learning material.

Guest speakers: Invite subject matter experts to talk about a topic. This can be outsiders or members of the class.

Reading: Read or tell a story, for variety use music in the background.

Discussions: Use questions to get others in the class involved. Not only can students learn from the instructor, but they can learn by listening to each other, and the instructor can learn from listening to the students.

Repetitions: Repeat things out loud.

Directions: When giving directions, be sure to give them orally.

Mnemonic devices: Mnemonics are artificial aids to memory. The keyword HOMES can be used to remember the names of the Great Lakes; H = Huron O = Ontario M = Michigan E = Erie S = Superior. Sentences and rhymes can also be used; to remember which direction to turn a screw to tighten = Leftie Loosie, Rightie Tightie. Steps in basic division can be incorporated into the sentence: Donald (or Donna) made some candy bars = D = divide M = multiply S = subtract C = compare B = bring down.

Be the Instructor: Pair the class and have one individual teach the other, then reverse roles.

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Concert Review: The instructor uses transparencies, pictures, charts, etc. that were used in presenting the lesson as a means of review. While playing soft music, the instructor displays and reads the instructional materials. A variation is to have a willing student read the instructional materials.

Oral Cloze: Use oral cloze (fill in the blank) activities to repeat key information

Teaching Kinesthetic Learners

(Adapted from materials from presentation, *Designing Workplace Training to Accommodate Culturally Diverse Learners*. Douglas Jones, Linda Mrowicki, Workplace Education Division of THE CENTER-RESOURCES FOR EDUCATION, delivered Jan. 1996.)

Kinesthetic learners learn best by doing. They like to be physically expressive. They also need to stretch and move periodically. The following are activities that enhance kinesthetic learning.

Walking and studying: Allow students to walk while they study.

Role playing: Use props and costumes while role playing. Can be done with a group or in pairs.

Action learning: Includes anything that requires people to use their bodies in some way while they learn. It could be a song, a dance, a mime, a physical acting out of a technology or process, or an active performance of the learning material where learners become interacting components of the material they are learning.

Strolling review: Have the group prepare colorful flip charts as a means of review. Hang them around the room. Play music softly as individuals walk silently around the room, carefully observing the wall display or examining the mind maps created by other learners. A variation is to play music while individuals stroll around and review.

Being the Coach: Ask one partner to be the coach while the other partner learns to perform a new task. After one run, reverse roles.

Demonstrating: Allow class members to demonstrate and physically do an activity. Provide opportunities for practice using repeated motion.

Writing: Writing requires students to use parts of their bodies. Write on surfaces with a finger. Write in the air. Trace on sandpaper. Take notes. Write lists.

Sequencing: Using a topic that has several steps or procedures, give each individual a piece of paper with the words or a graphic depicting one step or procedure. Ask the group to move around until they are in the correct sequence. An option is to act out what is on their piece of paper.

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Teaching Visual Learners

(Adapted from materials from presentation, *Designing Workplace Training to Accommodate Culturally Diverse Learners*, Douglas Jones, Linda Mrowicki, Workplace Education Division of THE CENTER-RESOURCES FOR EDUCATION, delivered Jan. 1996.)

Visual learners like to process, store, and retrieve information visually. The following are examples of activities that instructors can use to facilitate the visual learner.

Demonstrations and modeling: Since visual learners like to understand the "big picture," it is important to show or model all of what is expected before breaking it into its components.

Draw: Simple illustrations can be used to reinforce important information. Encourage students to draw as a means of committing key information to memory.

Imagery: Imagery is the mental visualization of objects, events, and arrays. The typical technique is to ask students to form a mental picture. It usually works best for concrete information and less well for abstract information. Images are better remembered if they are vivid and show some type of movement.

Study Guides: Study guides are used to summarize key information. They are useful for reviewing key points. Instructors can create study guides, or better yet, allow students or groups of students to prepare a study guide.

Graphic organizers: These are visual tools which can show the relationship of categories of information. Charts, graphs, and maps can be used to show relationships visually. They are also good because they usually show or explain a concept holistically. Instructors can create blank charts or matrices for the learner to complete.

Mental Imagery: Have learners rehearse or practice a knowledge base or a skill in their minds.

Mind mapping: Ask individuals to mind map a lecture or presentation, a written lesson, an article, an audio tape, a recollection, an experience, or anything relative to the learning situation that might be significant.

Note taking: Encourage visual learners to take notés using words or pictures. This provides them with another opportunity to visually rehearse the information. Note taking can also be done using a map which allows them to see the "big picture."

Create notebooks: Using notebooks for class projects provides another way for students to see the information in their own words. It allows them to "customize" the information and make it their own.

Color codes: Visual learners like to see different things/views. Use color as a means of focusing attention, or use it as a means of changing the environment to add interest visually.

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Study cards: Study cards use the visual sense to present the information. They can be used individually, with partners, or in large groups. Cards can be prepared by the instructor or students can prepare their own.

Pictures: Watch TV, filmstrips, movies, videos, etc. Another option is to have the group create their own video.

Mnemonics: Create acronyms, draw visual chains, or develop acrostics.

Directions: When giving directions, give them visually.

Tips on Teaching

1. Use logical sequences. Avoid jumping into topics without developing background or relevance for the skill at hand.
2. Control length of lessons into manageable chunks. Many employees come into classes at the end of a long and tiring day. Pace lessons so students can have short breaks.
3. Give recognition and encouragement. It is vial that you recognize and encourage all your students' progress toward their individual goals. Unfortunately, often adult learners are not supported by friends and family who view time spent in class as time taken away from them.
4. Use coaching. Model new skills. Point out the problems or pitfalls many students have with lessons. Repeat explanations several times or a period of time and several ways to accommodate all learning styles. Be there for them.
5. Encourage involvement. Make sure students hear you validate how important it is to learn new skills. Techniques that make provisions for active involvement of students will achieve learning faster than more passive teaching techniques.
6. Give feedback. Adults need to be reassured that they are on track. Give feedback often, and be sure to give negative feedback along with something positive.
7. Use summaries and advance organizers. When materials are detailed or involved, help students see the "big picture."
8. Questions will help you assess how your students are understanding. Make sure they are not accusatory in tone. It is possible to inadvertently press a "hot button" based on a students' unpleasant school memories. Maintain a safe atmosphere for students when questioning them.
    - Direct questions are usually *yes* or *no*, or short answer. They are easy to control.
    - Open-ended questions are more likely to prompt discussion. They are not as easy to control.

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Instructor's Lexicon

The following lexicon is provided to remind teachers that there are a variety of strategies and principles that can be employed in teaching. When you are not getting the response you expect, when faces are blank or bored, when attendance starts to slip--*try something else*.

Anticipation Guides (Readance, Bean, and Baldwin) Prepare students for reading by asking students to reach to a series of statements prepared by the teacher in advance. Expected response is TRUE or FALSE.

Application of concepts to different situations- learning that is applied immediately is retained longer and is more likely to be used immediately than that which is not. Techniques must be employed that encourage the immediate application of any material in a practical way.

Application to individual situation --Provide real life or real work scenarios for which students read different texts to solve problems

Article/pictures

5 W's (Who, What, When, Where, Why/How)
Antonyms/Synonyms
Match or rewrite topics/headlines
Change time, place, people and rewrite
Write questions with higher levels of critical thinking

Brainstorming--All responses are accepted, no judgment. Activates background knowledge. Gets students thinking before they read or write.

Cartoons- students fill in blank balloon with appropriate response

Categorical Overview-- Write down associations , think how they are related, categorize information, and label.

Cloze-- It is a method of systematically deleting words from a prose selection and then evaluating the success a reader has in accurately supplying the words deleted. In a given passage the first and last sentence is provided in tact. Thereafter selected deletions are made. *Ex.* Every 5th or 10th word; Initial/final letter; Word/ phrase; All nouns or verbs, etc.

Clustering-- Similar to mapping, adds visual dimension to the process of organizing ideas, helps students separate ideas into categories. Improves organization of thoughts for speaking or writing.

Coded Vocabulary--Student marks words that he knows with an asterisk, check mark for words he has heard of, and circles the words that he does not know.

Compare and contrast--Write or discuss similarities (compare) and differences (contrast)

Concrete Items/Demonstrations-- Including actual items in classes helps those learners who need more tactile or kinesthetic learning experiences understand. Visual and audio learners have an easier time with traditional formats than other kinds of learners.

Continuum of Descriptors--Write adjectives on a line to show degrees of modification, such as minuscule, tiny, small, average, big, huge, enormous

Cued Retelling (See article on Retelling--Free and Cued)

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Cubing--On a paper cube, write down one of the following words on each side of the cube: describe, compare, associate, analyze, apply, argue for. When writing or discussing an object/concept, have students write about it using the suggestions from each side of the cube.

Designated Roles (Cooperative learning)

Listeners note points of disagreement
" " what is not said
" " questions to ask

DRAT (Directed Reading/Thinking Activity-Haggard, 1985)

Activate prior knowledge
Predict what will be covered
Read to designated point
Confirm, revise, or elaborate prediction with information from text
Continue in similar fashion through text.

Dyads confirm/explain
make decisions
draw conclusions

Find someone who . . . --an ice breaker activity to raise awareness of the depth of experience and diversity in the class. Typically you can only get another person to sign your sheet once. Categories can be as generic as "find someone who has more than 5 brothers and sisters" or "find someone who speaks another language" to class specific information like "find someone who has read a the work of Edgar Allan Poe." It can be designed for many topics but always helps students get comfortable with each other.

Flash card directions--Challenge learners to read more than one word at a time by giving direction quickly on flash cards. Ex. Put your hands on the table.

Free-writing/thinking

Can you think of a time . . .
Questions regarding topic

GIST--requires readers to reduce the first sentence of a passage to 3 or 4 words. The next two sentences to 5 or 6 words. The next three sentence to 7 or 8 words. This requires readers to make meaning and determine their own key words.

INSERT (Interactive Notation System for Effective Reading)--Students place a √, X, +, !, ?, ?? and * besides ideas they read to indicate whether they understand it (√), are excited about it (X), don't understand it (?) , are stumped by it (??), or want to remember it (*).

Interviewing--Encourage students to generate a list of questions that would give them the information they would like to find out about someone. Have students break into pairs and interview their partner, using questions. Then let each introduce his/her partner using the information obtained.

Jigsaw/segmented reading --Instructor assigns parts of a selection to different readers. Readers read their part silently. Each reader shares what they read with group.

Journals--Students write reaction to class, write comments, write questions. Instructor does not judge them on technical competencies. May be used to tie topic of class to learner. If topic is American Education, journal writing questions could be: Where did you go to school? What did you like best in school? What irritated you the most? Why did it irritate you? Who was your favorite teacher? Why did you come to this class?

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Key word predicting activity--Instructor selects passage and notes 10 key words. Words are shared with learners who are asked to predict content. Learners should try to make sense of key words. Next, learners read passage and find out if predictions are on target.

K-W-L--(Ogle, 1986) Students identify what they **K**now about a topic , what they **W**ant to find out about a topic, and what they **L**earned about the topic.

LEA (Language Experience Approach, Stauffer, 1970) Students dictate sentences about an experience as instructor transcribes. This text become the reading material for that student.

Learning style--The 3 major learning modalities:

Visual-needs to see material
Auditory-needs to hear material
Kinesthetic- needs to move around while learning

LINK-- L= List I= Inquire N=Note K=Know List all associations for concept/topic on overhead/chart; inquire - give examples, clarifications about associations; note - write what comes to mind for one minute (overhead off/chart covered); know - what I know now about this concept/topic?

List and skip-- instead of looking up words as you read, use a *List and Skip* bookmark. Write down unfamiliar words from reading selection. After completing selection, look to see if any words were understood through use of context.

Main Idea-- explanation overheard by instructor between students. "How would you tell your mama what the (article, book, chapter) was about if you were calling her long distance?

Mapping (Baumann, 1991)--Arranging key terms into a diagram that is meaningful to the student. It can include the following:

Key words/phrases
Structure
Questions
Connecting lines/circles

Is a graphic representation of the relationship between major ideas and supporting details.

Metacognition - Being aware of how you learn, and the process of thinking through a learning situation. The development of self-questioning or monitoring of patterns of thinking, which helps students become an independent learners who can recognize and correct their processing errors.

Questions with others

What do you think about . . .?
Why is . . . used for . . .?
What would you do if . . .?

Paired Questioning --Divide students into pairs, read passage, close book. Each in turn asks questions with the other answering; tells important ideas; paraphrases or summarizes; agrees/disagrees; draw picture or graphic representation of what learned.

Reading strategies-- Good readers bring what they know about the topic to the print on the page. They are active readers. Good readers take chances, they risk being wrong. Good readers guess at or skip words they don't know and read on for help. Good readers

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expect the material to make sense. Good readers try to match reading speed to what they are reading.

Reading techniques

see: Flash card directions
see: GIST
see: Key word predicting activity
see: List and Skip
see: Word Bank

Reciprocal questioning

Students work in pairs
Both read a portion of a reading selection.
One asks the other a question.
Continue reading selection
Alternate asking questions.

Retelling/rewriting- Can be free retellings, cued retellings, and/or cued comprehension questions. Provides an opportunity for students to reflect and revise their thoughts. Teachers can record students thoughts without having to infer right or wrong choices. Possible prompts: *Write down everything you can remember about the selection you just read.* Provide a list of words from the passage, and then, *Use these words to help you remember everything you can about the passage. See Retelling--Free and Cued*

Retelling--Free and Cued - A free retelling allows a reader to structure his or her demonstration of comprehension without the constraints often imposed by a testing situation. If the objective of the assessment is to find out how the student is thinking about the content rather than how much he can demonstrate that he knows, the unprobed (free) retelling is probably the best response.

Researchers find the free written retelling to be an invaluable tool as they explore issues related to reading comprehension. Retellings allow analysis of the link between the response and the original source (the text). Many teachers are reluctant to use them because they do not lend themselves easily to objective scoring.

Since remembering and understanding are not synonymous, there is value to using retrieval cues as an aid to comprehension. By including word or phrase cues the reader has the freedom to indicate his or her comprehension according to personal dictates while simultaneously providing bits of text to help dissolve the confusion between what is understood and what is remembered. **Cued retellings** may be the best of both worlds.

In order to do this form of assessment, the teacher needs to have comprehension questions in mind. the perspectives on comprehension that are to be checked should be noted.

Were the students responses text explicit (Just the facts recited)
Were the responses full of nonessential details? (Not important to understanding the essential message of the passage)
Does the student understand the essence of the passage? (Main idea)

Unless you assess students' comprehension with the intent to learn what students do and do not remember, you can only speculate about their comprehension and the appropriateness of your instructional focus.

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Say Something- 2 students read a passage to a designated point Each has to say something about the reading

Segmented reading --see: Jigsaw

Semantic map--see Mapping and **Webbing**

Sequencing--*Paragraphs*

- Articles are cut into parts based on content.
- Student reads each part
- Student orders the parts based on content

Pictures

- Cartoons or picture sequences are cut apart
- Student orders the part based on content

T Chart -- (Johnson & Johnson)Write the name of a skill to be learned or practiced and draw a large T beneath it. Write "looks like" on the left side of the T and "sounds like" on the right side. On the left side list behaviors that one might see in someone exhibiting this skill. On the right side list phrases that might be used by someone exhibiting this skill.

Think aloud- (Davey)Instructor models and tells the thought process for an instructional piece of material.

Three-way rotation--Three different ways of saying the same thing.

Time line-- Events are placed on a time line to visualize the relationship of events in respect to what else was happening at the same time.

Total Physical Response (Asher)--incorporates listening to directions or commands like, "STAND UP!, SIT DOWN!" and they respond to commands without speaking. Used most effectively in early ESL situations.

Transformation- charts, graphs, maps, forms -learn key idea and transform into different format/media Ex. Act out without words Make a chart or form to explain information to others

Webbing-- Similar to semantic mapping - as a graphic representation of the relationships between major ideas and supporting details. After reading, introduce the central question/idea circled on an overhead or chart. Encourage students to identify supporting secondary ideas, which branch off from the central idea. Supporting details are then supplied for the secondary ideas in a logical fashion.

Word bank--a versatile tool for vocabulary learning. Excellent warm up before reading and writing, assessing prior knowledge. Select a topic related to reading. "When I think of _____ I think of _____" Instructor fills in blanks then asks, "What do you think of?" Try to generate 25-50 words per topic.

a. Builds critical thinking skills by clustering words that belong together.
b. Try adding prefixes and suffixes. Discuss how changing the form can change meaning.
c. Focus on spelling; note roots and affixes, number of syllables.
d. Plan a writing exercise. Determine organization according to purpose.
   How to = chronology
   Personal experience = narrative
   Description = topic characteristics.
e. Add vocabulary words as they are discovered through reading or conversation

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Instructor's Role and Responsibilities

There are four main responsibilities in your role as instructor of this class.

1. **Instruction** -- As the instructor you will choose the lessons and gauge the depth of instruction based on the needs of your students and the accomplishment of the objectives.

2. **Assessment** -- This vital part of your role should be handled with great sensitivity. Many adults have not been in a classroom setting for a long time. For some, the testing situation and facing the results of tests is an extremely stressful experience that can cause them to drop out of the class. Diffusing the anxiety of the testing situation is an important part of your role.

The pretest should be giving before instruction begins to gauge the level of your students' understanding and prior knowledge of course content. The posttest should be given at the end of instruction. Results should be compared to see if instruction made a difference.

3. **Keeping attendance records** -- In some work situations, attendance is mandatory. In others, employees are paid to attend and accurate attendance records should be maintained.

4. **Other records** -- Anecdotal comments and observations, especial in regard to learning or change, should be documented. Companies and unions are very interested in this kind of feedback and may want to use quotes for recruitment or promotional activities.

This lesson format encourages you to keep notes on how individual lessons worked and what changes might be made to make the lesson more effective to your particular situation.

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Objectives

Computer Use

- To identify the components of a computer and their functions
- To key in information they generate, to edit, to save, and to print
- To discuss information needed to buy a computer

Work Process

- To identify the specific tasks required for each job
- To write memo to supervisor or next shift
- To recognize terminology specific to the plant
- To discuss and write about the plant
- To compile a story about the plant

Reading

- To determine meaning from job related materials (memos, manuals)
- To use context clues to help determine unknown words
- To use fix -up strategies when meaning is lost while reading
- To determine time order of items in a selection
- To read passages/selections of interest
- To read items composed on the computer to a partner

Writing

- To write in correct form and in complete sentences
- To use correct form for memos, business and friendly letters
- To brainstorm, compose, edit, and print ideas
- To recognize and use correct grammatical form

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How These Lessons are Organized

This guide includes objectives for each of the four areas addressed and the lessons to carry out those objectives. The work process objectives are incorporated into the lessons given. For convenience, reading, writing, and computer exercises will be presented separately, so one can mix and match according to the particular needs of a class. A glossary of terms used for this course is provided. Pretests and posttests are also included.

Each lesson has been designed to assure objectives are accomplished. Lessons are designed in a format that has five parts:

I. Learning Objectives: specific, observable behaviors to be realized by the learner for that particular lesson.

II. Materials: tools, equipment, supplementary worksheets, instructional resources.

III. Basic Skills: Generic, foundation skills basic to learning.

IV. Possible Activities: Introduction to learning activity, connection to background knowledge, establishment of purpose for this activity, and step by step suggestions for carrying out the learning objectives.

V. Workplace Context: the rationale for learning this skill/concept, how it relates to the context of the workplace.

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Explanation of Lesson Format

Learning Emphasis (area of focus: computer, writing, reading, or work process)

Goal of Instruction (what is to be accomplished during this session)				
Learning Objectives	**Materials**	**Basic Skills**	**Possible Activities**	**Workplace Context**
Specific, observable behaviors to be realized by learners in this session These objectives can be used for evaluation purposes to determine if students accomplished what was intended for this lesson	Tools, equipment, supplementary worksheets, instructional resources Any material that might be helpful in carrying out the lesson	Generic skills basic to learning. These are foundation skills that all learners need.	Introduction to learning activity is given. Connection to what learners already know that will help them understand this concept/task is important for purposeful learning. Step by step suggestions are provided for carrying out the learning objectives.	This provides the rationale/reason why this particular skill/understanding is important in the context of the workplace .

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Planning and Scheduling

Time Requirements

This class is designed to contain at least 20 hours of instruction. The format of the course allows some flexibility to customize lessons to fit into available slots. Due to individual differences of students and variability of students' skills, the instructor must make decisions on which portions of lessons to emphasize or for which to provide additional time.

Size of Class

This course was designed for a class of 9 students, since that was the number of computers in the classroom. Because of individual help required with students with limited ability on the computers, it is recommended that the size of class be kept under 10.

Expected Outcomes

Participants of this class will increase their knowledge of computers and their components as well as apply computer skills to communicate to others, especially as it relates to work -related needs. They will also increase awareness of writing conventions - spelling, punctuation, capitalization, grammar, and correct form - and be able to edit their messages for clarity. They will improve their ability to read carefully, with an understanding of the intended message, as well as utilize "fix-up" measures when meaning is lost. They will recognize important work-related terminology, understand the definitions and use them in work-related tasks.

Prerequisites

There are no prerequisites for this class except for a willingness to learn and apply what has been learned. The materials used are targeted to participants with 4th to 6th grade level reading and writing skills. Those with limited skills in these areas can benefit from the individualized nature of *The New Reading Disk*, which provides auditory help with the reading, for tnose who need it. Individualized help with the writing skills may need to be given with students with limited ability. Because of the interactive nature of many of the lessons, students should be able to participate and benefit from these discussions.

What This Course Won't Do

This course is not meant to be a beginning reading and writing class. It is important that students who are very limited readers and writers be identified at the beginning of the class, so individualized programming can be planned for these. *The New Reading Disk* assists those who have limited language ability and should benefit those who need to hear the language patterns, but this should not be mistaken as a beginning reading program.

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Suggested Timing for Each Lesson

There are for skill areas addressed in this course. They are:

reading
writing
computer skills
and work-related tasks

It is suggested that each of the four areas be included in each 2 hour session.

A possible time frame would allow 10 minutes for computer/keyboarding exercises (that students can do individually as they arrive in class), 10 minutes for writing/grammar exercises, 20 minutes for reading selections and strategies, with the remaining time allotted for work-related activities such as describing job functions, memos, story of plant operation, etc

Another possibility, suggested by some participants, is that of having all the instructional material presented on one day with the other day devoted to uninterrupted time on the computer to complete writing assignments. Depending on the capabilities of the class and focus of the group, the instructor can best judge how to meet the needs/interests of the participants in the class.

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LESSONS

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Computer

Workers will identify the parts of a computer and their functions.				
Learning Objectives	**Materials**	**Basic Skills**	**Possible Activities**	**Workplace Context**
• Students will identify the parts of the computer: Identify the hard drive. Identify the monitor. Identify on/off switch. Identify the mouse and it's function. Identify the disk. • Students will identify the components of the keyboard (e.g. function keys, numeric pad, alphabetic pad, home, key, etc.). • Workers will identify icons and discuss their usefulness. • Workers will print/ save any keyed in information.	• Computer with mouse • Reading Disk • Student disks • Journals • Pen / pencil	• Follow verbal instructions • Identify parts and functions of computer • Basic computer skills	• **Activate prior knowledge** 1. Ask workers in what instances they have used computers? 2. Can they think of any examples of how computers are used/ or how computers might be used at Detroit Axle? • Use an actual computer to demonstrate its components. • Each worker will boot up the computers, identify parts, and use the mouse. • Allow students to play solitaire to familiarize workers with movement of the mouse. • The workers will be briefed on the components of the keyboard, menu bar and tool bar. • Each worker will be given the opportunity to type in information print / save it on their hard disks. The class will make a cover page for their journals as a practice exercise on the computer. This exercise is designed to familiarize workers with the basics of computing , (i.e. fonts, font sizes, clip art, centering, bold, saving, and printing).	• Workers will become familiar with components and function of the computer so they will feel more comfortable with computers that may be used in the future workplace.

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Computer-Writing-Work Process

Workers will write, type, and discuss their job activities and duties.

Learning Objectives	Materials	Basic Skills	Possible Activities	Workplace Context
• Participants will discuss the need to communicate their jobs to others • Participants will list needed steps to complete each job. • Participants will enter information onto computer. • Participants will correctly use task-related words, abbreviations, and acronyms as related to each job. • Workers will discuss the importance of each job as it links to the overall production and distribution of axles.	• Blackboard, chalk,markers • Paper • Pen/Pencil • Journal • Terminology list of job titles	• Order or re-order of information. • Explain information clearly to another • Restate information.	"If you were to describe your job description or duties to a person you were training, how would you do it? What would you tell a new worker so he would be able to do your job?" "Why is it important to be able to describe or define your job?" 1)ISO9000 certification 2)QS9000 certification • List different job titles on the board represented by class members. • Each worker will write down, in journals, information as it relates to their job descriptions and duties, highlighting any words with which they have difficulty spelling. • To check for understanding, the co-worker will describe his/her job description to his/her partner. • Review the need for thinking about and writing job descriptions.	• Workers will effectively communicate, both written and verbally, their job descriptions and duties to others. • Workers need to clearly communicate, in both verbal and written form, to supervisors and other employees.

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Job Titles

assembly line worker	person who assembles parts, that are made elsewhere, into a final product
block operator	person who test pinion and gear teeth
CMM operator	person who operates this inspection equipment that checks for quality
cutter grinder	person who sharpens cutters and drills
dispatcher	person who tells people where to go to specific destination
drill operator	operator of a drill press that drills holes in parts
electrician	person who installs and repairs electrical equipment
foreman	person in charge of people in a certain area
fork lift driver	person who drives an industrial vehicle, that raises and lowers, used to move stock from area to another
gas analyst	person who checks the gases in heat treatment to make certain they are properly mixed
gear lab technician	person who check pinions and gears for right cut and size
Hofler operator	person who runs a Hofler that provides a reading on gears and pinions out in the department
inspector	person who check the quality of parts
jitney driver	person who drives a fork lift (see above)
jobsetter	person responsible for setting up machines to produce good parts
Kasper operator	person who runs a machine that turns side gears
lapper	person who runs machine that makes sure the gear set matches
layout inspector	person who inspects dimensions of a particular part
machine operator	person who runs production on a machine every day
machine repairman	skilled tradesman who repairs any parts of machine that don't function properly
mill wright	skilled tradesman who builds or repairs conveyors and moves machines and other heavy equipment
Okuma operator (lathe operator)	person who operates a machine that cuts parts to different designs
pipe fitter	skilled tradesman who fits and repairs water pipes and air lines
press operator	person who operates a machine that uses force to reshape parts
pyrometer man	person who checks furnaces for correct air and gas mixture
repairman	person who repairs parts that were not correct the first time it was run
roller	person in the gear division who checks to make sure gears and are matched together
stock loader	person who puts parts on the line or puts up stock for another worker to machine
straightener	person who straightens a part after it goes through heat treat to correct any distortions
super finisher	person who puts a fine finish on the pinions
tester	person who inspects gear sets after lapping
tool maker	person who repairs fixtures and makes new parts for machines
Zeiss operator	person who operates a machine that reads measurement specifications

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Job Titles Exercise

1. Drill operator	_____ person who tests for position and noise.
2. Hofler operator	_____ person who places parts together to assemble the axle
3. Stamp operator	_____ person who drills holes in parts
4. Cutter	_____person who runs the gear and pinion together with an abrasive oil
5. Sorter	_____person who cuts off pieces to be tested in the Metallurgic Room
6. Assembler	_____person who places identification information on parts
7. Lapper	_____ person who places parts in bins according to color
8. Job setter	_____ person who inspects parts in place for oil leakage, tightened bolts, etc.
9. Furnace operator	_____ person who checks specifications and changes tools and sees that machines run properly
10. Inspector	_____ person who has to harden the stock by heating it to right temperature
11. Tester	_____ person who checks gears for run out

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Answer Key for Job Titles Exercise

1. Drill operator	11	person who tests for position and noise.
2. Hofler operator	6	person who places parts together to assemble the axle
3. Stamp operator	1	person who drills holes in parts
4. Cutter	7	person who runs the gear and pinion together with an abrasive oil.
5. Sorter	4	person who cuts off pieces to be tested in the Metallurgic Room
6. Assembler	3	person who places identification information on parts
7. Lapper	5	person who places parts in bins according to color
8. Job setter	10	person who inspect parts in place for oil leakage, tightened bolts, etc.
9. Furnace operator	8	person who checks specifications and changes tools and sees that machines run properly
10. Inspector	9	person who has to harden the stock by heating it to right temperature
11. Tester	2	person who checks for run out

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Writing-Computer

Workers will edit their job activities for correct form and clarity.				
Learning Objectives	***Materials***	***Basic Skills***	***Possible Activities***	***Workplace Context***
• Students will list items that should be included in job descriptions • Learners will organize their job descriptions to include necessary information. • Students will edit job descriptions for writing conventions	• Journals • Pencils • Blackboard, chalk/markers • Worksheet on editing suggestions	• Write complete sentences. • Use correct punctuation. • Use correct spelling. • Use correct grammar and capitalization. • Organize and prioritize.	• Invite students to suggest a list of components their job descriptions should include. Write these on the board. The descriptions should include: title, materials, duties, quality parameters, duties in sequential order, possible problems, and time constraints. • Students will use a handout on editing suggestions to aid them in editing their job descriptions. They will check for spelling, punctuation, and grammar. (See Editing Tips in following work sheet.) • When finished, workers will exchange their job descriptions with their partners. • Each partner will edit his/her co-worker's job description for content and clarity, asking for clarification in any area not understood. • The partner will then describe the person's job he/she edited to the rest of the class. Class members are invited to ask questions if information in job descriptions is not understood.	• Each worker should be able to clearly write his job description. Each worker should be able to clearly explain his job, so another worker would understand how to do his job. • The workers will understand the need for asking questions for information that is not clear.

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			• Review components of an effective job description. Review editing suggestions. Reemphasize the need for clarity in communications.	

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Editing Suggestions

1. Did you write complete sentences?
   Does each sentence have a subject and predicate/verb?
   - ***At the beginning of my shift, I start my machine.***
   - ***The parts have to be washed well.***

2. Did you capitalize correctly?
   Did you capitalize the first word in the sentence?
   Did you capitalize proper names like ***Mike, Kasper (machine), Detroit Axle, Monday, May, etc.***

3. Did you use correct punctuation?
   Did you put a period at the end of the sentence?
   Did you use a comma, if you used a clause or long phrase?
   - ***I am responsible for cleaning all gears and pinions.***
   - ***After these parts are cleaned, they go through sealant.***

4. Did you use proper grammar?
   Do the subject and verb agree?
   - ***(I work, he works, they worked)***
   - ***(I go, he goes, they went or have gone)***
   - ***(I do, he does, they do or have done)***

5. Did you spell words correctly?

6. Is what you wrote clear to your readers? Can your readers easily understand what you wanted to say?

7. Did you avoid run-on sentences?
   - ***I wash parts and I put them on the rack and I get more parts.***
   - ***I wash parts. I put them on the rack. Then I get more parts***

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Work Process-Computer-Writing

Workers will evaluate terminology list.

Learning Objectives	*Materials*	*Basic Skills*	*Possible Activities*	*Workplace Content*
• Learner will read and make a judgment about Axle terminology that is to be included in the class glossary of terms.	• Pencils • Glossary of work related terminology	• Recognize job related vocabulary. • Evaluate relevancy of vocabulary/ terminology.	• Workers will be provided with a list of Axle terms compiled from the needs assessments interviews, initial observation tour, and input by production management. • Workers will read the list. They will place a check mark next to any word with which they are familiar. For any word that they don't recognize, they will put a question mark next to it. Any word that they think everyone at Axle should know, they will underline. They will also add any additional significant terms from their own departments that weren't included on the list. • Pass out quiz on definitions worksheet for workers to complete.(See following worksheet)	• Workers need to recognize, understand, and use the correct terminology related to their job so that they can read and properly use these terms on the job.

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Terminology at this Plant

1. **Job Titles**
   - assembly line worker
   - block operator
   - cutter grinder
   - dispatcher
   - drill operator
   - electrician
   - foreman
   - fork lift driver
   - gas analyst
   - gear lab technician
   - Hofler operator
   - CMM operator
   - Zeiss operator
   - inspector
   - jitney driver
   - jobsetter
   - Kasper operator
   - lapper
   - layout inspector
   - machine operator
   - mill wright
   - Okuma operator (lathe operator)
   - pipefitter
   - press operator
   - pyrometer man
   - repairman
   - roller
   - stock loader
   - straightner
   - super finisher
   - tester
   - tool maker

2. **Machines and work stations**
   - air gauge
   - assembly lines
   - Barnes line (tube machine line)
   - broach
   - chamfer
   - cross assembly lines
   - dial machine
   - draw furnace
   - drill
   - face hob
   - face mill
   - furnace
   - Gleason 950, 606, 607, 116, 502,513
   - grinder
   - hard turn lathe
   - Kasper
   - Lamb lines
   - lapper
   - Lasalle lines (case machine)
   - mill newcor - RWAL machines (rear wheel anti lock)
   - newcor lathe
   - Ocuma
   - Olafson lathe
   - Phoenix
   - press and weld lines
   - quench press
   - reamer
   - roto flow (spline and thread roller)
   - Yazda (CNC machining center)

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3. **Tools and Equipment**

Allen wrench
arbor
back face gauge
bearing
bubble gauge
carbide
case depth
collet
cutter key
deburr tool
dial indicator
diameter gauge
ding ball gauge
expandise
face hob
face mill area
gear components
gear sheets
go-no-go gauge
green roll
grinder
hardness check
harpoon
hoist
hub gauge
hydraulic oil
insert
loader arm
mallet
marpose gauge
measure in the green
meter gauge
micrometer

4. **Other Terms**

over all length gauge
oil quench
air quench
aqua quench
pallet
pinion
pinion shaft
pinions straightner
plug gauge
position bearings
pre-roll diameter
ratio
retained austenite
ring gear
rockwell harness
roller tally sheets
runout gauge
scales
shift
shoulder gauge
side gear
slot gauge
spindle
straighten gauge
taper gauge
template
test block gauge
thread checker
thread gauge
torque wrench

5. **Work Process Terms**

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adjustment
anneal stock
bore
coned properly
crown point
db level
die quenching
dunnage
face angle
face mill area
first, 2nd, 3rd harmonic
heal coast
heal drive
heat treat distortions
heat treatment
interference
isothermal anneal
lame low
lap
lubrite
nick and bump
noisy coast
noisy drive
parameter
root of the tooth
run out
shank diameter
specifications
toe drive
toe coast
tolerance
tooth contact pattern

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6. CNC Terminology

3 1/2 '' disc
abort
absolute
activated/deactivated
average errors
axial locating surface
axial position
axis attribute
contact pattern
controller
coolant
cooler
cursor
datum
dechuck
disconnect
dresser
emergency stop
expandisc
feed-rate
horizontal
hydraulic pump
incremental position
input key
linear axis
machine setting changes
Macro numbers
module/pitch range
override
pitch diameter
pivot distance
plunge gear
pressure angle
radius/radii
reference axis
root angle
soft key
speed designation
spiral angles
spread blade
sum of errors squared
summary
swivel
swivel angle
tailstock
tilt angle
traverse
unispan
vertical
warp angle
work spindle rotation

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Reading-Writing-Computer-Work Process

Workers will discuss the changes taking place in the workplace today.

• Workers will identify changes taking place in the workplace. • Workers will discuss the effects these changes have on them personally and collectively • Workers will identify skills necessary for them to remain competitive in today's market. • Workers identify the pros and cons of the changes taking place. • Workers will write down recall of information from the article, "The 21st Century Worker"	•Journal •Paper •Pen/Pencil • Reading Disc • Article, "The 21st Century Worker" • Blackboard, chalk/markers • *Reading Disc* • Computers • Individual disks	• Generate ideas • Compare and contrast information. • Evaluate information. • Draw a conclusion. • Recall information	• **<u>Activate prior knowledge</u>** "How long have you worked here?" "What are some of the changes taking place in the plant since you first started working here? "How do these changes affect you?" • The workers will read the article "The 21st Century Worker". • The workers will write down everything they can remember from the article. The instructor will then ask specific questions pertaining to the article. (See following sheet.) Then the class will discuss changes taking place in the workplace and its affect on them as individuals. • The class will review some of the changes taking place in the workplace. The teacher will write these changes in two categories, *today* and *yesterday*. The workers will select an area in which changes	Workers will identify changes in the work environment and be able to compare and contrast these differences, identifying the effect they have on the plant and it's workers.

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			have taken place in the workplace and the affect it has had on them as individuals. They will write a short essay about this, first in their journals and then on the computer. • The workers can take ideas from "Today's Worker" debate format on the *Reading Disc* to help them in formulating their thoughts. • If time permits, students will begin typing their essays on the computer, saving this on their disks. • If workers come across articles that pertain to changes in the workplace they are encouraged to bring them to class. • Review changes taking place in the workplace and how it affects them.	

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Auto Workers of the 21st Century

It's not just vehicles that are being remodeled; it's auto workers, too. Many auto workers are expected to retire between 1993 to 2003. About 90,000 auto workers from Michigan, will be among these. The auto industry has the chance to hire a greater percentage of new workers than at any time since the early 1900s, when modern work began.

The companies are expected to spend $800 billion over 30 years on wages, training and benefits. It is hoped that new workers can compete with the Japanese. If the new employees don't work out, the Big Three may be stuck with them until 2025, until they reach retirement age.

Some of the changes that will affect workers are already being felt.
- In-plant computer use is at an all-time high.
- New production workers now take as many as three days of mental and physical tests to get jobs that only required a physical before.
- Self-directed work teams, often without foremen, are becoming common on factory floors.
- New workers and old-school managers are beginning to clash over work rules, privileges and traditions that some find obsolete.

In order to be competitive, the Big Three have had to cut employment rolls and made fast-tracked investments in new technology. They have forced suppliers of raw materials and parts to meet higher quality standards. The companies are also attempting to impose quality control on a key component of production-- *the hourly workforce*.

"The quality of workers will be what distinguishes one company from another," said one automobile company director of training. "Specifically we need people with what auto executives are fond of calling '21st century skills' -- science, math, and computer literacy."

Special tests have been devised to check reading and math skills, the ability to use charts, to convert fractions to percentages and so forth. A manual dexterity test is also given to applicants who score well on these tests. The workers' attitude is as important as test scores. This is usually determined through an interview and a group problem-solving exercise.

Plants are concerned about making a quality vehicle and meeting production schedules. They are beginning to realize that this has to be a common goal for both management and labor. Workers and management need to realize that they are both on the same team.

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Retelling for *Auto Workers of the 21st Century*

I. Retelling (written, after silent reading of selection) "Write everything you can remember about the selection you just read."

II. Cued Retelling "Retell everything you can about the selection you just read. Use the following clues to help you remember. But tell as much as you can, not just what you know about these cues."

retire
hire
changes felt
quality control
21st century skills
attitude
common goal

III. Cued Response Questions:

1. Name three actions that the Big Three have had to take to be competitive.

(Cut employment rolls, invested in new technology, and forced suppliers to meet quality standards) (15 points)

2. Why are companies concerned about getting quality hires? (The will be stuck with them for a long time, until they retire) (20 points)

3. If you wanted to hire better workers, what might you do? (Test, offer better incentives / benefits) (20 points)

4. A good attitude is considered to be an important quality in workers. Why is this necessary? (For team work) (15 points)

5. What are the "21st century skills" desired in workers? (science, math, and computer literacy) (15 points)

6. What might be used in a "manual dexterity" test? (Put together a puzzle, circle all numbers

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Workers of Today and Yesterday

Advantages of being a worker long ago:

1. It is harder being a worker today.
2. There are new, complicated machines to operate today.
3. Workers have to take more responsib .ities for quality today.
4. Workers need to know about jobs other than their own.
5. Workers need to solve their own problems more now.
6. Workers need to get along with more people now.
7. Computers on machines require new skills for workers.
8. Workers need to know more math (decimals) now.
9. Workers didn't need as much education in yesterday's workplace.
10. Companies are laying off workers to downsize more today.

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Workers of Today and Yesterday

Advantages of today's workers:

1. It is easier being a worker today. Work is no as physical.
2. There is more training available now.
3. Jobs are more interesting than before.
4. New machines do most of the work.
5. There are better health care and pension benefits today.
6. Companies offer options in company stock.
7. Workers are valued now as company resources.
8. There are more opportunities to move up.
9. Conditions for working are better now.
10. There is better communication between labor and management now.

Writing-Work Process

Workers will understand the importance of editing. Workers will begin to define effective communication.				
Learning Objectives	***Materials***	***Basic Skills***	***Possible Activities***	***Workplace Content***
• Workers will edit each other's papers for clarity and writing conventions: spelling, punctuation, capitalization, etc. • The class will discuss the difference between errors that must be documented as opposed to those that they can take care of by themselves. The workers will write these examples in their journals. • Learners will analyze problems to determine whether they should be documented or just handled by themselves without letting others know about them.	• Paper • Pen/Pencils • Journal • Blackboard, chalk/marker	• Skim for overview. • Scan for detail. • Analyze problems		Workers will identify writing errors. Workers will understand the importance of clarity. Workers will understand the importance of documentation. They will learn how to address (document) problems to the appropriate staff members.

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Possible Problems that Workers may Face

1. Pieces coming off the cutter drill are rough and not properly cleaned. Write a memo to a fellow worker or supervisor telling why this may be happening and what might correct the problem. (the cutter key may be broken or there may be a bad spindle)

2. The loader arm has jammed and the machine has shut down. What might have caused this to happen? What might be done to fix it? Explain this to your supervisor, who is concerned about production quotas.

3. The stock you start to load on your machine has some nicks and bumps that prevents your machine from accepting these pieces. You are already behind on production. What will you write to your supervisor?

4. You are ready to do inspection but notice that some ratio tags are missing. What could result from this problem? What will have to be done? Write about this problem to the supervisor.

5. The ring gear cutter has shut down. What might cause this to happen? (It has run out of oil or chips have not been cleared away) Explain this problem to the jobsetter.

6. Your supervisor says your department is behind production quotas. You are trying your best but there just isn't enough good stock to run. What will you tell your supervisor about this situation?

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Writing-Work Process

Workers will determine differences between letters and memos and have practice writing each.

Learning Objectives	*Materials*	*Basic Skills*	*Possible Activities*	*Workplace Content*
• Workers will document problems on the line by writing a memo to the supervisor or next shift. • Learners will edit their memo. • Students will determine the difference between memos and letters. • Students will write a business letter and a friendly letter to become familiar with the correct format	• Journal • Possible problem correction forms from lines in departments • Paper • Pen/Pencil	Writing conventions: spelling punctuation capitalization clarity Recognition of business and friendly letters parts and format	• **<u>Activate prior knowledge</u>**: "What things do you expect to find in a memo indicating a problem.? We have already discussed the format, but what are some other things?" (e.g. spelling, punctuation, capital letters, etc.). • Workers will suggest possible problems that could occur on their lines with a partner from their line. Each person will briefly describe the problem in his own memo • The partner will then read the other's memo. Each will verbally mirror what he thinks the other person is saying . Each will provide suggestions how to better get the message across. • Ask students to think of reasons that they might need to write a business letter. List these on the board. • Discuss how a memo differs from	Workers need to understand the importance of writing clearly and precisely the problems that need to be documented on the line.

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			a business letter. Pass out copies of sample memo and business letter. Continue the comparison between the two. • Encourage students to think of a situation in which they need to write a business letter or provide a scenario for writing one. • Discuss the possible differences between a friendly letter and business letter. Provide a sample of a friendly letter. Instruct students to write a friendly letter to someone they know. • Students will edit their letters and print out copies to include in their folders for future reference.	

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Memorandum

Date: September 11, 1996

To: Dept. 81, Second Shift

From: John Doe

Time: 3:36 P. M.

Subject: Damage to Exciter Rings

There has been an excessive amount of damage to the exciter rings on both 8 ¼ and 9 ¼ carrier assemblies. Special care must be taken not to bump this ring. The ring is made of a very soft metal that will nick, scratch, or bend easily. The slightest imperfection will cause a reject on the antilock brake test, which will have to be completely torn down, Special care must be taken when loading or unloading machines, skid boxes, pallets or racks.

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6598 Trenton Drive
Newburg, Michigan

October 11, 1996

Best Buy
100 Telegraph Road
Southfield, Michigan 48034

Dear Sirs:

The Compaq computer, serial # C1234567, that I purchased from your store on August 15, 1996, is not working. I carefully followed the instructions for setting up the computer. It worked fine for one week. Now, however, when I turn on the hard drive, it groans and refuses to boot up.

The warranty says that the computer will be replaced if there is a serious defect that cannot be corrected. Please advise me where I can get help in correcting this problem.

I will be grateful for prompt attention to this matter.

Sincerely yours,

John Doe

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Writing-Work Process-Reading

Workers will discuss and write about the manufacturing processes.				
Learning Objectives	***Materials***	***Basic Skills***	***Possible Activities***	***Workplace Content***
• Learners will list the steps of making a gear in correct sequence • Learners will write a "story" of how axles are produced at Detroit Axle	• Journals • Pencils • Reading Disk • Computer • Glossary of Terms	• Write complete thoughts • Put thoughts into sequence. • Use technical vocabulary correctly • Read orally in an expressive manner	**Activate prior knowledge** 1. **"If you had a friend or relative who wanted to visit your workplace, what would you tell them about Detroit Axle? What would you want to show them on their visit?"** 2. Ask workers what is manufactured at Axle? 3. "Have you thought of the steps involved in the making of an axle?" 4. "One of the most important parts of the axle is the gear and pinion. We will be thinking about how they are manufactured." • Brainstorm in pairs • Write down what they know about the work process • Put their ideas in order • Write down ideas in journal • Read the article on "gears" on the *Reading Disc.* • Add any new information and key in information on the word processor.	Students will fill in cloze passage about gears. It is important for all workers to understand the total work process flow/ production and the significant part they contribute.

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			• Edit the "Axle Story." Each participant will read aloud his story on the tape recorder. This recording will be used as voice-overlays for a video tape that has been planned to be made about production at the plant..	

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Axle Story (from *The New Reading Disc*)

1. Blanks have to be checked for accuracy.
2. Blanks have to be stamped for identification.
3. Blanks go the gear cutting department.
4. The proper cutting surface has to be located or referenced.
5. Teeth are cut into blank rings and pinions.
6. To obtain high strength, gears must be heat-treated.
7. Gears have to be cooled rapidly (quenched).
8. Gears have to be tested for proper shape, space, and tooth contact.
9. A running test checks for noise and smooth operation.
10. Gear sets are assembled into the axle.

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Reading, Writing, Work Process

Workers will consider the process of manufacturing gears				
Learning Objectives	***Materials***	***Basic Skills***	***Possible Activities***	***Workplace Content***
• Learners will list the steps of making a gear in correct sequence • Learners will use context clues to complete a cloze passage about gear production. • Learners will edit their compositions about Detroit Axle	• Journals • Pencils • Reading Disk • Computer • Glossary of Terms	• Write complete thoughts • Put thoughts into sequence. • Use correct technical vocabulary • Use context clues • Use editing skills: Capitalization Spelling Punctuation Clarity checks	• **Activate prior knowledge** • Review steps in gear production. • Provide each student a cloze passage about gear production to complete. • On gear production worksheet, students will number sentences in correct order.	Learners will determine the sequence in gear production so they will understand and appreciate what is manufactured at their worksite.

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Gears and Pinions made at Detroit Axle

Although there are many parts that make up an axle, the ring gear and pinion could be considered the heart of the axle. The ring gear and pinion set start out as _____forgings. These have to be checked to make sure _____are of acceptable quality. They receive their first cutting _____in Department 73. The pinions are turned to size _____one of the many lathes in the department. Turned _____are fed through a rotoflow to cut spline teeth _____a thread onto to pinion.

The ring gears are _____on the back face on a lathe such as _____Kasper. Next the ring gears are drilled and tapped _____ the back face and identified with the date, size _____ratio number.

The completed ring gears and pinion blanks _____ moved to Department 74 or 74-1 to have actual _____cut into each blank.

The teeth of the ring _____and pinion are checked for correct tooth depth and _____ tooth contact.

The equipment in the Hoefler room is _____to check the parts for accuracy, quality and operating conditions. _____ding ball gage checks the depth of the gear teeth.

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The gears then go to the furnace to be _____treated. As they come out of the furnace, they _____ placed into the quenching machines to be quickly cooled. _____process hardens the parts.

The lapper runs ring gears _____ pinions in contact with each other, using a mixture _____ oil and abrasive compound. Unwanted particles are cleaned out _____the teeth, and the gear and pinion are mated. _____will remain together until placed into the differential.

The _____contact pattern is again checked. The parts are washed _____then run through a sealant. They are sorted by color and taken to Department 81, where they are assembled into the finished axle.

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Answer Key for *Gears and Pinions made at Detroit Axle*

Although there are many parts that make up an axle, the ring gear and pinion could be considered the heart of the axle. The ring gear and pinion set start out as raw forgings. These have to be checked to make sure they are of acceptable quality. They receive their first cutting operation in Department 73. The pinions are turned to size on one of the many lathes in the department. Turned blanks are fed through a rotoflow to cut spline teeth and a thread onto to pinion.

The ring gears are cut on the back face on a lathe such as the Kasper. Next the ring gears are drilled and tapped on the back face and identified with the date, size and ratio number.

The completed ring gears and pinion blanks are moved to Department 74 or 74-1 to have actual teeth cut into each blank.

The teeth of the ring gear and pinion are checked for correct tooth depth and correct tooth contact.

The equipment in the Hoefler room is used to check the parts for accuracy, quality and operating conditions. The ding ball gage checks the depth of the gear teeth.

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The gears then go to the furnace to be heat treated. As they come out of the furnace, they are placed into the quenching machines to be quickly cooled. This process hardens the parts.

The lapper runs ring gears and pinions in contact with each other, using a mixture of oil and abrasive compound. Unwanted particles are cleaned out from the teeth, and the gear and pinion are mated. They will remain together until placed into the differential.

The tooth contact pattern is again checked. The parts are washed and then run through a sealant. They are sorted by color and taken to Department 81, where they are assembled into the finished axle.

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Reading-Writing-Work Process

Workers will determine sequential order of work related events and processes.				
Learning Objective	***Materials***	***Basic Skills***	***Possible Activities***	***Workplace Context***
• Learners will sequence order of daily events. • Workers will discuss sequence order of work processes at Axle. • Students will determine order sequence of sentences in Axle Story.	• Journals • Pencils • Computers • Worksheet on Axle Story	• Logical order determination. • Sequence of events.	• Write on board "Put shoes on. Get out of bed. Eat breakfast. Alarm goes off." • Discuss which would happen first. • "Think about your job, what so you have to do first, second, next?" ***Work Sheet Exercise*** • "Manufacturing gears and pinions ar an important part of Detroit Axle. Think about the process from the first step." • Brainstorm steps. • Write on board. • Students read "Axle Story" on Reading Disk. • Provide hard copy of scrambled order of sentences.	• Workers need to think about the sequence in which job tasks occur. • Being able to follow sequence in work process is important in the workplace. • Workers will be able to determine logical order of daily events, job, and process of gear and pinion manufacturing.

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Axle Story (Mixed Order)

(Place correct number in space next to sentence.)

____ Gears and pinions have to be cooled rapidly (quenched).

____ Blanks have to be stamped for identification.

____ To obtain high strength, gears must be heat-treated.

____ Blanks go the gear cutting department.

____ Teeth are cut into blank rings and pinions.

____ Gear sets are assembled into the axle.

____ Blanks have to be checked for accuracy.

____ The proper cutting surface has to be located or referenced.

____ A running test checks for noise and smooth operation.

____ Gears have to be tested for proper shape, space, and tooth contact.

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Answer key for *Axle Story (Mixed Order)*

(Place correct number in space next to sentence.)

7 Gears and pinions have to be cooled rapidly (quenched).

2 Blanks have to be stamped for identification.

6 To obtain high strength, gears must be heat-treated.

3 Blanks go the gear cutting department.

5 Teeth are cut into blank rings and pinions.

10 Gear sets are assembled into the axle.

1 Blanks have to be checked for accuracy.

4 The proper cutting surface has to be located or referenced.

9 A running test checks for noise and smooth operation.

8 Gears have to be tested for proper shape, space, and tooth contact.

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Reading

Workers will answer specific questions about alternative fuels. They will discuss locating additional materials.

Learning Objectives	*Materials*	*Basic Skills*	*Possible Activities*	*Workplace Context*
• Learners will discuss need for alternative fuels. • Learners will predict what they will read in article on Reading Disk. • Learners will answer comprehension questions about alternative fuels.	• Journals • Pencils • Reading Disk • Computers	• Inference skills • Main idea • Determine meaning of vocabulary	"When I say 'alternative fuels', what comes to mind?" List on board. "Why is development of alternative fuels necessary?" (discuss) "What kinds of alternative fuels are you familiar with?" "What would you expect to find in the article on alternative fuels in the Reading Disk?" List on board. Read article. • Give learners quiz on alternative fuels. • Review quiz- "Which questions gave you the most trouble?" Discuss problem areas and provide strategies for dealing with these. • Discuss the concept of *hybrid* cars. • "If you wanted to find out more information about alternative fuels, where might you look?" • Discuss helps that are available in reference sources for finding materials: index, table of content, headings, etc.	• Workers need to be able to locate needed materials. • Workers need to comprehend specific details in work-related materials.

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Reading

Workers will determine main idea of passage.				
Learning Objective	***Materials***	***Basic Skills***	***Possible Activities***	***Workplace Context***
• Read and comprehend passage. • Determine main idea. • Select title for passage.	• Journal • Pencils • Computers	• Main idea • Summarize	• "Have you ever had to send a telegram?" Every word counts so just the bare message is relayed. • Workers will read a hard copy article "New Car Options," from the Reading Disk. • Workers will write a sentence that summarizes the main point of the article.	• Workers need to comprehend intent of memo messages from management or other workers.

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1. Cars should have safety features like air bags and steel door beams.
2. Cars should get good gas mileage.
3. Cars should have roomy interiors with adequate head and leg room.
4. There should be collapsing steering columns and crumbling hoods.
5. Cock pit-like instrument panel should be easy to reach for the driver.
6. Sleek, attractive design in cars is desirable.
7. A smooth, quiet ride is important,
8. An 8-way adjustable seat provides comfort.
9. Fast acceleration when needed is important.
10. There should be adequate space for hauling children and cargo.

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Reading-Writing

Workers will determine steps in solving a problem.				
Learning Objectives	***Materials***	***Basic Skills***	***Possible Activities***	***Workplace Context***
• Determine problem. • Analyze solution. • List steps to • accomplish goal. • Write letter concerning a problem.	• Journals • Pencils • Computers • Hard copy of "Buyer Letter" from *Reading Disk*	• Comprehension • Analysis • Synthesis	• "Have you ever sent away for something and when it came, it was the wrong size, color, etc.? What did you do?" Discuss. • "What could be done to solve this problem?" • List possible solutions on board. • Distribute hard copies of "Buyer Letter" on the *Reading Disk*. Read, underline main idea and key parts of the letter. • Workers will write a letter about a hypothetical computer purchase situation to the manufacturer. (See accompanying exercise).	• Workers need to know how to effectively deal with and solve problems that aris on the job.

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Being a Wise Consumer

1. Decide exactly the features that meet your needs.
2. Check the ratings in a consumer magazine.
3. Find out what options are available.
4. Find out where the item can be purchased.
5. Shop around for the best price. Go to at least 3 different locations.
6. Read the fine print to be sure you are getting what you want.
7. Know the store's policy for returning an item.
8. Find out about the guarantee and service policy, if it needs repairs or replacement.
9. Keep your receipt or sales slip for reference, if needed.
10. If not satisfied, take it back within the time limit.

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Problem:

You went to Sam's Club, located at 24536 Haggerty Road, Farmington Hills, Michigan 48246 on September, 23, 1996. You bought a Compaq computer, serial # C 8776542, that does not work. The store would issue you a new computer and says you have to write the manufacturer for a full refund. The manufacturer's address is 500 West Maple, Warrensville, Georgia 80557.

Assignment:

Write a business letter to the company about the faulty computer.

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Reading

Workers will clearly state an opinion and provide support for it.				
Learning Objective	***Materials***	***Basic Skills***	***Possible Activities***	***Workplace Context***
• Students will determine the essential elements of an issue. • Decide which is the best argument. • Student will choose statements that support a position.	• Journals • Pencils • Computers • Hard copy of "Speed Limit"	• Comprehension o ideas • Analysis • Synthesis of ideas	• "Do you think the speed limit should be changed? Why or why not?" (List on board for or against) • Read "Speed Limit" debate on the *Reading Disk*. Distribute hard copies Read and underline those ideas you agree with. Discuss as a class. • Let students tell which they chose and why. • Decide which are the best supportin statements for and against. • "When is it important to provide support for an opinion you want to express?" (Union meeting, PQI, Safety Issue, etc.)	• Workers need to support opinions when presenting their side of an issue. • Workers should clearly express opinions with adequate support.

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Should the Speed Limit be Changed?

Arguments for changing the speed limit:

1. The speed limit should be raised.
2. People drive faster than posted speeds now.
3. Lower speeds don't really reduce accidents.
4. Changing speed limits didn't change the way people drive.
5. There are actually fewer accidents with raised speed limits.
6. Drivers can make the best decisions about the right speed to drive.
7. Cars have to exceed the posted speed to keep with the flow of traffic.
8. Most people can be trusted to drive at sensible speeds.
9. There would be fewer traffic tickets with higher speed limits.
10. The present speed limits are not enforced, as it is.

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Should the Speed Limit be Changed?

Arguments against raising the speed limit:

1. Low speed limits make drivers more careful.
2. There are fewer accidents with lower speeds.
3. Cars get better gas mileage with lower speeds.
4. If speed limits are raised, some people will drive too fast.
5. Older people like to drive slower.
6. Young people drive too fast, as it is.
7. Insurance companies want lower speed limits.
8. Speed limits reflect what most drive use.
9. Drivers don't have as much control at high speeds.
10. Lower speeds help to save gasoline consumption.

Reading

Workers will skim/scan to locate details.				
Learning Objectives	***Materials***	***Basic Skills***	***Possible Activities***	***Workplace Context***
• Students will determine difference between skimming / scanning. • Students will determine when to skim or to scan. • Students use skimming or scanning to locate needed details.	• Journals • Pencils • Computers • Hard copy of "New Car Features" from *The New Readin Disk* • Hard copy of "HMO's" from *The New Reading Disk*	• Skim to get gist o material. • Scan to look for specific detail.	• "When you get a new magazine or newspaper, do you read every word, or do you glance through it to see what's there?" • Looking to get the general idea of what's there is "skimming". • "When might you use skimming?" (Letter, Article, Advertisement) • "When you look down a page/ passage to find specific information such as a telephone number, time a meeting begins, etc., this is called "scanning". Can you think of other times you might use "scanning"?" Ingredient in a recipe to buy at the store, part you need to order, the setting for a machine, etc. • "When buying a new car/van/truck you will decide what features you will want? What do you look for when buying a car?"	• When workers need to locate information, they need to skim/scan for needed details in work-related materials.

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			• Read "New Car Features" on *Reading Disk*. Pass out hard copies. Find and underline feature you think are most important. What else might you consider in buying a new car?" ***This same procedure could be used for HMO's debate.*** (See hard copy of HMO's)	

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Desirable New Car Features

1. Cars should have safety features like air bags and steel door beams.
2. Cars should get good gas mileage.
3. Cars should have roomy interiors with adequate head and leg room.
4. There should be collapsing steering columns and crumbling hoods.
5. Cock pit - like instrument panel should be easy to reach for the driver.
6. Sleek, attractive design in cars is desirable.
7. A smooth, quiet ride is important.
8. An 8 - way adjustable seat provides comfort.
9. Fast acceleration when needed is important.
10. There should be adequate space for hauling children and cargo.

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HMO's

Arguments for HMO's:

1. HMO's are good health care choices.
2. Most HMO's provide good care at low costs.
3. Prescriptions are usually only $2.00.
4. Eye exams are covered in full.
5. Lab test are fully covered.
6. Allergy test and injections are covered.
7. Immunizations are covered.
8. Regular child examinations are covered.
9. Delivery costs are covered in full.
10. Office visits are paid for.

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HMO's

Arguments against HMO's:

1. You cannot choose you own doctor
2. You cannot choose your hospital.
3. You feel more comfortable with your own doctor.
4. Doctors change locations more at HMO's.
5. Eyeglasses/contact lenses are not covered by HMO's, except for cataract surgery.
6. Certain treatments may not be covered by HMO's.
7. HMO doctors have to refer patients to specialists to be able to use their services.
8. Some HMO's are not widely recognized in other areas.
9. HMO facilities may not be conveniently located for patients.
10. Blue Cross/Blue Shield is older and better accepted everywhere

READING ACTIVITIES

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Reading Activities/Possibilities

The selections from ***The New Reading Disk*** can be used as indicated in the lessons or used separately. One possibility to use individual selections from the disk is to introduce the topic by saying, "When I say (topic), what comes to mind? What would you expect to read with this topic? What do you think you will find in this passage?"

Students will then read the sentences of the selection on *The New Reading Disk* individually (or in a small group reading from one computer) and then discuss what is read. For the article formats (New Car Features, Advantages of Chrysler Cars, Axle Story, Stress Reduction, Being a Wise Consumer, Future Cars, Alternative Fuels), students individually or as a group can determine the sentences they feel are most important to the topic, select them for the spaces indicated and have them printed to take with them. With more advanced students, they can write their own article on the topic.

With the debate format topics (Advantages of Being a Worker Today, Should Speed Limits be Changed?, HMO's, Leasing or Buying) students can individually or in pairs/small group, read, choose the position they want, select the sentences that best support their position, and print these out. Again with more advanced students, they can read the selection and write their own thoughts about the issue with supporting statements.

The letter writing format lends itself more to an individual response, since the topics (Suggestions for Plant Improvements, Memo for the Next Shift, Complaint to Civic Official, and Buyer Complaint) involve personal input.

Other Suggestions for Reading of Passages

In pairs,(especially with workers of limited ability) instruct students to read to a designated stop, such as "arguments for" an issue, have students discuss with a partner any new concepts, difficult words, or other concerns or questions. Then proceed with the rest of the passage.

Another possibility is to read to a designated stop and each partner has to "say something" about the part of the selection read. Predictions could be made as to rest of the passage, and then read to confirm or adjust their prediction.

To focus on comprehension, questions could be listed at the beginning of the reading and students would read to answer the questions. A list of statements could be provided to which students would respond by indicating whether they felt they were true or false. Then the passage would be read and students would discuss which statements were different than what they had determined.

The untitled copy of the passage could be provided for students to read and determine what the main idea or essence was. Individually, or as a group, they could determine what would be an appropriate title for the selection.

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Alternative Fuels for Cars

1. Alternative fuels usually produce fewer emissions
2. Alternative fuels help keep the air cleaner.
3. Methanol is slower in producing SMOG.
4. Alternative fuels can help reduce global warming.
5. Hybrid cars, like the Chrysler Patriot, use less fuel.
6. Hybrid cars use both gasoline engines and stored power.
7. Electric cars are quiet and require no fuel.
8. Storing enough power is a problem with electric cars.
9. Electric cars can cover only a limited range without recharging.
10. Solar cars are limited by the amount of sunshine available.

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Axle Story

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Being a Wise Consumer

1. Decide exactly the features that meet your needs.
2. Check the ratings in a consumer magazine.
3. Find out what options are available.
4. Find out where the item can be purchased.
5. Shop around for the best price. Go to at least 3 different locations.
6. Read the fine print to be sure you are getting what you want.
7. Know the store's policy for returning an item.
8. Find out about the guarantee and service policy, if it needs repairs or replacement.
9. Keep your receipt or sales slip for reference, if needed.
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Desirable Features in Chrysler Vehicles

1. Cab-forward design allows more usable space.
2. Chrysler offers a good warranty - 3 years or 36,000 miles.
3. Dual air bags are standard equipment.
4. Fold-away integrated child safety seats are available.
5. Chrysler minivans were named "Car of the Year" by Motor Trend.
6. Roll-out seats are handy in the minivans.
7. The long wheel base offers stability on the road.
8. Crumple zones offer protection in a severe collision.
9. Split-folding rear seats makes hauling long items easier.
10. Chrysler offers good value in cars like the Breeze and the Neon.

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7. A smooth, quiet ride is important.
8. An 8 - way adjustable seat provides comfort.
9. Fast acceleration when needed is important.
10. There should be adequate space for hauling children and cargo.

1. Cars should have safety features like air bags and steel door beams.
2. Cars should get good gas mileage.
3. Cars should have roomy interiors with adequate head and leg room.
4. There should be collapsing steering columns and crumbling hoods.
5. Cock pit - like instrument panel should be easy to reach for the driver.
6. Sleek, attractive design in cars is desirable.
7. A smooth, quiet ride is important.
8. An 8 - way adjustable seat provides comfort.
9. Fast acceleration when needed is important.
10. There should be adequate space for hauling children and cargo.

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Future Cars

1. Cars may look futuristic, like they are from outer space.
2. Transmissions may have "infinitely variable gearing."
3. Cars may have rear airbags for rear passengers.
4. Cars may be equipped with TV for rear passengers.
5. There may be no rear view mirrors. Closed circuit TV monitors may be used.
6. Doors may have no door handles. T' ey may use "proximity card readers" instead.
7. Cars may have spacious interiors.
8. Some may have a voice activated instrument panel.
9. Some may use a height-adjustable accelerator.
10. On-board satellite navigation system will provide traffic and weather information.

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Reducing Stress

1. Recognize what causes you stress.
2. Think about how you usually react to stress.
3. Face your problem directly.
4. Know what is important to you. Choose your battles carefully.
5. Think about how important this situation will be in 5 or 10 years from now.
6. Accept what you cannot change.
7. Develop a positive attitude. Let go of WORRY.
8. Plan time alone to relax, think, and plan your activities.
9. Learn to relax through breathing exercises or quieting music.
10. Become more flexible in your thinking.

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HMO's

Arguments for HMO's:

1. HMO's are good health care choices.
2. Most HMO's provide good care at low costs.
3. Prescriptions are usually only $2.00.
4. Eye exams are covered in full.
5. Lab test are fully covered.
6. Allergy test and injections are covered.
7. Immunizations are covered.
8. Regular child examinations are covered.
9. Delivery costs are covered in full.
10. Office visits are paid for.

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HMO's

Arguments against HMO's:

1. You cannot choose you own doctor
2. You cannot choose your hospital.
3. You feel more comfortable with your own doctor.
4. Doctors change locations more at HMO's.
5. Eyeglasses/contact lenses are not covered by HMO's, except for cataract surgery.
6. Certain treatments may not be covered by HMO's.
7. HMO doctors have to refer patients to specialists to be able to use their services.
8. Some HMO's are not widely recognized in other areas.
9. HMO facilities may not be conveniently located for patients.
10. Blue Cross/Blue Shield is older and better accepted everywhere.

Should the Speed Limit be Changed?

Arguments for changing the speed limit:

1. The speed limit should be raised.
2. People drive faster than posted speeds now.
3. Lower speeds don't really reduce accidents.
4. Changing speed limits didn't change the way people drive.
5. There are actually fewer accidents with raised speed limits.
6. Drivers can make the best decisions about the right speed to drive.
7. Cars have to exceed the posted speed to keep with the flow of traffic.
8. Most people can be trusted to drive at sensible speeds.
9. There would be fewer traffic tickets with higher speed limits.
10. The present speed limits are not enforced, as it is.

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Should the Speed Limit be Changed?

Arguments against raising the speed limit:

1. Low speed limits make drivers more careful.
2. There are fewer accidents with lower speeds.
3. Cars get better gas mileage with lower speeds.
4. If speed limits are raised, some people will drive too fast.
5. Older people like to drive slower.
6. Young people drive too fast, as it is.
7. Insurance companies want lower speed limits.
8. Speed limits reflect what most drive use.
9. Drivers don't have as much control at high speeds.
10. Lower speeds help to save gasoline consumption.

Workers of Today and Yesterday

Advantages of being a worker long ago:

1. It is harder being a worker today.
2. There are new, complicated machines to operate today.
3. Workers have to take more responsibilities for quality today.
4. Workers need to know about jobs other than their own.
5. Workers need to solve their own problems more now.
6. Workers need to get along with more people now.
7. Computers on machines require new skills for workers.
8. Workers need to know more math (decimals) now.
9. Workers didn't need as much education in yesterday's workplace.
10. Companies are laying off workers to downsize more today.

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Workers of Today and Yesterday

Advantages of today's workers:

1. It is easier being a worker today. Work is no as physical
2. There is more training available now.
3. Jobs are more interesting than before.
4. New machines do most of the work.
5. There are better health care and pension benefits today.
6. Companies offer options in company stock.
7. Workers are valued now as company resources.
8. There are more opportunities to move up.
9. Conditions for working are better now.
10. There is better communication between labor and management now.

Leasing or Buying

Arguments for leasing a car:

1. Leasing a car is easier on my pocketbook.
2. Leasing allows me to always have a new car.
3. When my lease is up. I don't have to find a buyer.
4. I don't have to worry about repairs with leased car.
5. I can change cars more often while leasing.
6. I can usually get a lease car right away.
7. I don't have to put as much down, as when buying a car.
8. My monthly payment are less.
9. I can try out cars I might not want to buy.
10. There are attractive offers for leasing a car.

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Leasing or Buying

Arguments for buying a car:

1. When I buy a car, I know it is mine.
2. I drive too many miles to lease a car.
3. Leasing is like renting - nothing to show for it in the end.
4. I like to keep cars for a long time.
5. I take better care of *my own car*
6. I like to be able to drive as much as I want.
7. I don't like leasing someone else's car.
8. I would like to pass on my old car to one of my children.
9. I take pride in my car and don't want to give it up.
10. I would be more worried if I get a lease car soiled

More Reading Activities Appropriate for the Workplace

I. **For students to best comprehend written materials, they need to understand the concepts of "author, message, and receiver."** This can be done by having students engage in discussion about what they have recently read, who wrote it, what the message was, and to whom was it intended and for what purpose it was written. Notices, memos, job descriptions, operator guidelines, company newspaper, letters, recipes, instructions, novels, etc. can be distributed and discussed in this way. As materials are considered, these concepts should be emphasized so that learners think about "author, message, and receiver" of each item. Have students, working in pairs or small groups, think of the materials they are familiar with and make a "cluster" or semantic map (see appendix) for different types of messages, authors and audiences.

II. **Being able to find relevant information for a need or task is an important competency**. This involves being aware of resources available as well as how to locate and process needed information. Discussion could follow as to the best place to look for such things as: movie start times, possible stock market gains, the latest information on baseball scores, tire prices, directions for programming a VCR, correct spelling of "dyslexia," recipe for black bean enchiladas, the population of Bosnia. Have students brainstorm information that they would like to find out. List these on the board or overhead. Let students in pairs or small groups actually look up suggested information. Each pair or group can list materials they were able to locate information. Make a chart to include all the information sources used.

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III. A. Another important part of effectively finding needed information involves knowing what to do when the information is located. A discussion about skimming - quickly reading the material to get a gist of the content - and scanning - looking for specific information on a page - could be helpful. Ask students when they most likely would use skimming - checking to see if an article interests them, looking over a letter to see what is important, etc.. Likewise let them suggest times when scanning would be most useful - looking for a telephone number or address, the price of an item on sale, etc. Then give them opportunities to skim and scan in a variety of materials: in an announcement, for specific address or time for meeting; in a letter, for intent of sender; in a newspaper article, for the gist; in a recipe, for amount of main ingredient to buy, etc.

B. Use real workplace reading materials. Using the labor agreement booklet, have students quickly locate information such as How many days of vacation or personal days are allowed in a given year? Can a worker opt to take pay instead of days off? If so, by when do these days or pay have to be taken? What forms have to be filled out? (for personal days and vacation requests) For which courses will reimbursement be made? When students have located information, ask them what features of the labor agreement booklet were helpful in locating the needed information.

IV. Locating information from different sources and synthesizing this material into a concise, useable form is a desirable competency. Discuss times when workers may have had to collect information and write something for a union meeting, a church committee meeting, a report for their boss, a letter to an editor, family history, a genealogy finding, an argument for an insurance settlement or a case in court, etc. How did they go about finding the information they needed? How did they determine what to

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include and what to leave out? Assist students in formulating a guideline for effective locating, sifting through, and composing a written piece. After discussing each part, have students make a semantic map or other representation of the information.

V. **To effectively construct meaning, it is necessary to first activate prior knowledge about a topic**. This could be demonstrated by showing students cartoons/jokes that require special background knowledge to get the point. With different cartoons or jokes, have students relate what kind of prior knowledge is required to understand and appreciate the humor. Ask students if they have ever tried to understand something for which they had little or no background knowledge, such as trying to order in a Chinese restaurant where the menus were printed in Chinese or trying to get on the internet when you know little about it. Give them cartoons, articles, documents, etc. that require a special background understanding. Have them determine what would be needed to appreciate/comprehend the item.

VI. **Along with understanding the need for prior knowledge is the ability to access their own prior knowledge when needed. Give students an article about a topic**, such as "surfing on the Internet." Lead them to understand what things they might already know about the topic, such as what is involved in surfing or water skiing. Then have them relate what they know or think they know about the Internet. Have they ever heard of it? Do they know anyone who has ever used it? What kinds of information might be available on the Internet? Might it be somewhat like looking up information in an encyclopedia? How might it be like or different using an encyclopedia?

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VII. Modeling effective reading techniques can be helpful for students. With the students following along, the teacher will read the article and "think aloud" what he/she is thinking as she/he comes to difficult words/phrases. Begin by surveying the article, commenting on ideas gained from text, pictures, headings, etc. Mention a few things that you know about the topic and set a purpose for reading the selection, what you intent to get from the piece. As you read the passage aloud, with students reading silently, pause to share what is going through your mind while you are reading. Comment on interesting ideas you read, things you don't quite understand, what you do when you lose the meaning - go back and reread or read on to see if the meaning becomes clearer. Comment on personal connections you make as you read. Continue in this way through the rest of the article. Then have students work in pairs to "work" through another article, telling each other what they are thinking as they read. Students could keep a reflective journal and write about their thoughts, comments, questions as they read.

VIII. Have workers consider what might happen if they would be moved to another department in the plant and they would have to train the new worker to take over their job. Have them think of all the things the new worker would need to be able to do in order to do their job and write these down. Then have them put these in order of importance. Then ask them to write them down in an understandable way so a new employee would be able to understand their job. Give them a copy of the job descriptions that have be developed by Human Resources and let them compare them with the ones they wrote. Let them discuss which they think is better and why. Have them read each other's job descriptions and provide comments. (These could be submitted to Human Resources for their consideration when they update job descriptions.)

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IX. Have students think of physical ways that their jobs could be made easier. Have them list these for each work station, discuss them, and come up with serious recommendations for management to consider. Then provide copies of the Ergonomic Recommendations that were done for the whole plant a few years ago. How did the students' recommendations compare to the experts who made recommendations for their work stations?

X. Discuss and find solutions for the following scenarios: Steps for problem - posing: 1) describe the content - provided in a "code" (this could be from articles, pictures, stories taken from participants' lives) 2) define the problem - uncover the essential problem 3) personalize the problem - internalize the problem as it relates the them 4) discuss the problem - realizing why this is a problem for them, how it has affected them 5) discuss alternatives to the problem - discuss possible achievable solutions and their consequences.

A.) The plant manager has received a grant to spend money for making improvements in the plant. He wants employees' ideas for ways of improving production quality. "To take your ideas seriously, you must support your ideas with a good rationale and written evidence showing what has been done in other plants. You will need to think about what would best improve quality of production, list these in order, carefully think why this would be a good idea, and read articles/accounts to support your case. Think of a way that you could best present this idea to others/management. How could you best get your idea across?"

B.) "Press No 79 or the welder at work station 23 keeps breaking down causing a lot of down time. Your team is evaluated by the number of items produced each shift. What could be done to remedy this situation? Who could you check with, what manuals, charts, diagrams, etc. could you read, to find out what to do when this happens? Compile the information you found. How could you present this to the other members of your team so they would understand what to do when this happens again?"

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C.) Many workers complain about doing the same task over and over each day. What causes workers to dislike their monotonous tasks? How might this situation be improved? Read what is being done in other plants that might work here. "How can you present your ideas to your team and management in a clever and convincing manner?"

D.) Many employees are already working in teams. Discuss and argue the pros and cons of teams being used at Davis. What are the advantages of teams? What are disadvantages of teams? "Would you like to see teamwork on your line? What data do you have to support your idea? What has been the effects of teams in other places? What would need to be done to get teams here? How can you best present your case?"

XI. Using articles provided by Human Resources, such as stress management, have students predict what they might read in such an article. As students suggest ideas, place these on the blackboard or overhead projector. "What kind of words might you find in this article?" List terms that might be included in the article. Have them read the article to see if what they predicted to be included actually was. Go back to the blackboard/overhead and add or change any of the items previously suggested. Have them discuss what is the cause of stress on the job. How could this be alleviated or lessened? How could they recommend to management a plan for addressing this problem? Are there some things workers, themselves, could do to address this problem - such as participate in relaxing exercises at breaks?

XII. With an article from <u>Auto News</u>, have students predict what the article will be about from just the title. List their suggestions on the board. Have students read to a designated point and stop reading. Ask them if they have guessed correctly thus far

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the content of the article. What have they read that made them want to change their predictions? What do they think will happen next? Read to the next designated point and stop. Again discuss if their predictions were correct. Predict what will take place from here on out. Continue through the rest of the article.

XIII. **Help students to become aware of steps needed to be taken when there is an injury at the worksite**. Let them relate what kinds of injuries have happened to them or someone they work with or know in the plant. What were the steps necessary to take care of the situation? How might these situations have been prevented? Read safety related articles and procedures, noting sequential directions. Have students produce a flow chart designating needed action. Have students walk others through the steps and receive comments or suggestions. How would they instruct a new worker about safety concerns and the procedures when an injury occurs? Role play a new worker and a seasoned one. What are the issues and concerns that a new worker should know?

XIV. **With an article, such as "Auto Workers of the 21st Century," provide a series of statements taken from the article, for which students will write T for true or F for false by each one**. Then have workers read the article and then go back to the "anticipation guide" to assess their answers. Have students discuss which answers had to be changed and why. Did they agree with the article or not? Where did they agree or where not?

XV. **If an encyclopedia is available on computer, students can look up articles that interest them**. Have students write down what they would want to be sure to include about the article, if they were to tell a friend or relative what this article is about.

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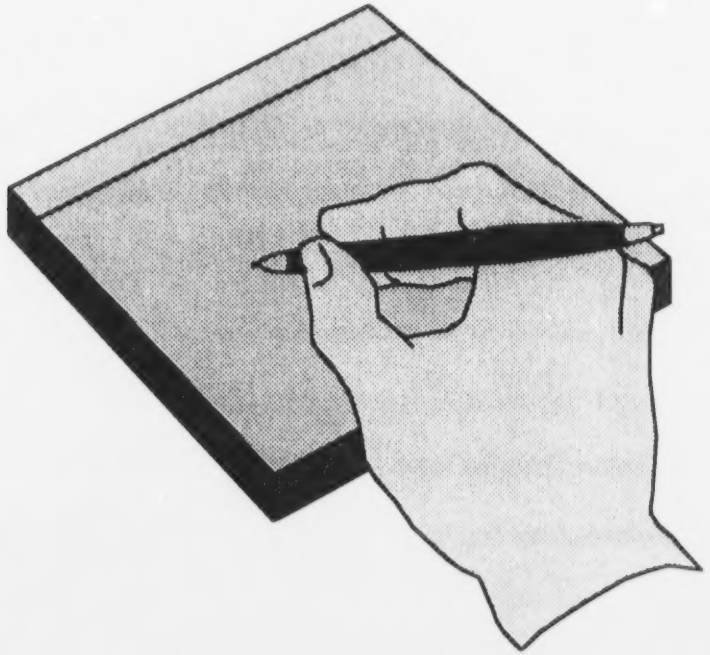
WRITING EXERCISES



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Writing Exercises Introduction

The following exercises are intended to make students aware of correct word usage. They are to be used as quick activities, (no more than 5-10 minutes) just to call attention to correct usage for students who may have forgotten which word to use or to inform students of the accepted form to be used in formal writing.

After a quick discussion of the correct form, students can do the following exercises, checking to see if they understand which word to use correctly. These can be checked as a group, with each student taking a sentence and explaining why he/she chose the word he/she did.

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Can - May

1. He ____ lift 200 pounds easily.
   can may

2. You ____ come if you like.
   can may

3. She _____ go to the wedding, if she can get off work.
   can may

4. He _____ hunt deer only during hunting season.
   can may

5. They ____ get most of the work done before 5 o'clock.
   can may

Answers: 1. can, 2. may, 3. may, 4. may, 5. can

A An

1. Here is _____ apple for you.
   a an

2. She took _____ piece of apple pie to her father.
   a an

3. He bought _____ new boat.
   a an

4. She brought _____ umbrella when it looked like it could rain.
   a an

5. They took her away in _____ ambulance.
   a an

Answers: 1. an, 2. a, 3. a, 4. an, 5. an

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Do, Does, Did, Have Done

1. They need to _____ their job by noon.
   Do - does - did - have done

2. He _____ a fine job on the computer every time.
   Do - does - did - have done

3. They have _____ all they could in the time allowed.
   Do - does - did - done

4. She _____ what she wanted to do yesterday.
   Do - does - did - have done

5. You have _____ a great job!
   Do - does - did - done

Go, Goes, Went, Have Gone

1. She _____ to the shopping mall yesterday.
   go - goes - went - have gone

2. She _____ there every Thursday.
   go - goes - went - gone

3. They have _____ home already.
   go - goes - went - have gone

4. They will _____ to the game every Monday night.
   go - goes - went - have gone

5. He _____ up North every summer.
   go - goes - went - have gone

Answers: 1. do, 2. does, 3. have done, 4. did, 5. done
1. went, 2. goes, 3. gone, 4. go, 5. goes/went

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It's, Its

1. The dog wagged _____ tail.
   its - it's

2. It looks as if _____ going to rain.
   its - it's

3. I think _____ a great idea!
   its - it's

4. The car lost _____ hub cap when it hit the pot hole.
   its - it's

5. Are you sure _____ safe to go now?
   its - it's

In, Into

1. Joe stood _____ the living room.
   in - into

2. The dog hurried _____ the kitchen to get its food.
   in - into

3. The kitten was hiding _____ the box.
   in - into

4. The cat jumped _____ the box and surprised the kitten hiding there.
   in - into

5. Pete stayed _____ the car while it rained.
   in - into

Answers: 1. its, 2. it's, 3. it's, 4. its, 5. it's
1. in, 2. into, 3. in, 4. into, 5. in

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To, Too, Two

1. I am going _____ the store.
   to - too - two

2. Do you want to go, _____?
   to - too - two

3. I am going to get _____ pounds of meat at the market.
   to - too - two

4. I will need _____ put it in the refrigerator, because it is so hot outside.
   to - too - two

5. There is _____ much fat on this piece of meat.
   to - too - two

This, These

1. Did you see _____ new software.
   This - these

2. _____ was the first one to come out the way I wanted.
   This - These

3. _____ parts have been distorted in the heat treatment.
   This - These

4. All _____ people arrived first and took the best seats.
   this - these

5. Next time, remember to use _____ tool first.
   this - these

Answers: 1. to, 2. too, 3. two, 4. to, 5. too
1. this, 2. this, 3. These, 4. these, 5. this

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Was, Were

1. He _____ the first one here.
   was - were

2. They _____ excited about the election.
   was - were

3. She _____ late for class.
   was - were

4. Joe and Tom _____ on their way to work when it happened.
   was - were

5. One of the tools _____ stolen from my toolbox.
   was - were

Is, Are

1. Nancy _____ busy at her work station.
   Is - are

2. Ed and Robert _____ going to see the Tiger's game tonight.
   is - are

3. She _____ the instructor for this class.
   is - are

4. There _____ nine students in that class.
   is - are

5. Where _____ he going now?
   is - are

Answers: 1. was, 2. were, 3. was, 4. were 5. was
1. is, 2. are, 3. is, 4. are, 5. is

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Who, Whose

1. Do you know _____ turn is next?
   who's - whose

2. _____coat is this?
   Who's - Whose

3. She wanted to know _____ responsible for the clean up today.
   who's - whose

4. _____ going to the game tomorrow?
   Who's - Whose

5. Do you know _____ car is parked here?
   who's - whose

You're, Your

1. _____just the one I wanted to see.
   You're - Your

2. Take _____ form to the main office.
   you're - your

3. It's _____ turn to go for coffee.
   you're - your

4. He said that _____going to lead the discussion.
   you're - your

5. I didn't see _____ cap lying there.
   you're - your

Answers: 1. whose, 2. Whose, 3. who's, 4. Who's, 5. whose
1. You're, 2. your, 3. your, 4. you're, 5. your

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Fewer - Less

1. There were _____ parts available.
   fewer less

2. There was _____ space left after everyone came into the room.
   fewer less

3. He had _____ pieces of chicken to eat than Joe.
   fewer less

4. When the children are all home, there is _____ room to move around.
   fewer less

5. There are _____books on the shelf now.
   fewer less

There - Their - They're

1. Did you see _____new house?
   there their they're

2. _____ more men than women in the class.
   There Their They're

3. They went _____ to get _____ checks.
   there their they're

4. They did _____job so well, everyone was surprised.
   there their they're

5. _____is not enough food for everyone.
   There Their They're

Answers: 1. fewer, 2. less, 3. fewer, 4. less, 5. fewer
1. their, 2. There, 3. there - their, 4. their, 5. there

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Write - Writes - Wrote - Written

1. They will _____ in their journals every day.
   Write writes wrote written

2. They _____ the letters yesterday.
   write writes wrote written

3. They have _____ their memos to their supervisors.
   write writes wrote written

4. She _____ in her diary every night.
   write writes wrote written

5. He will _____ a letter to the mayor.
   write writes wrote written

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Then -Than

1. It was almost midnight. He had to leave _____.
   Then Than

2. He had more work to do _____ Joe.
   then than

3. The year was 1948. Life was much easier _____.
   then than

4. Workers have it better today _____ they did many years ago.
   then than

5. _____ the bell rang. It was time to begin.
   Then Than

Answers: 1. write, 2. wrote, 3. written, 4. writes, 5. write
1. then, 2. than, 3. then, 4. than, 5. Then